

ExC

IUBMB Enzyme Nomenclature

EC 4.1.1.5

Accepted name: acetolactate decarboxylase

Reaction: (*S*)-2-hydroxy-2-methyl-3-oxobutanoate = (*R*)-2-acetoin + CO₂

Other name(s): α -acetolactate decarboxylase; (*S*)-2-hydroxy-2-methyl-3-oxobutanoate carboxy-lyase

Systematic name: (*S*)-2-hydroxy-2-methyl-3-oxobutanoate carboxy-lyase [(*R*)-2-acetoin-forming]

Links to other databases: [BRENDA](#), [EXPASY](#), [KEGG](#), [ERGO](#), CAS registry number: 9025-02-9

References:

1. Hill, R.K., Sawada, S. and Arfin, S.M. Stereochemistry of valine and isoleucine biosynthesis. IV. Synthesis, configuration, and enzymatic specificity of α -acetolactate and α -aceto- α -hydroxybutyrate. *Bioorg. Chem.* 8 (1979) 175-189.
2. Størmer, F.C. Isolation of crystalline pH 6 acetolactate-forming enzyme from *Aerobacter aerogenes*. *J. Biol. Chem.* 242 (1967) 1756-1759. [PMID: [6024768](#)]

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